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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/765,737	01/27/2004	Carl A. Reiser	C-3363	1103
7590		12/20/2007		
M. P. Williams				
210 Main Street				
Manchester, CT 06040				
			EXAMINER	
			ONEILL, KARIE AMBER	
			ART UNIT	PAPER NUMBER
			1795	
			MAIL DATE	DELIVERY MODE
			12/20/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Office Action Summary**

Application No.

10/765,737

Applicant(s)

REISER, CARL A.

Examiner

Karie O'Neill

Art Unit

1795

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 01 October 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on October 11, 2007 has been entered. Therefore, Claims 1-5 are pending in this office action.

### ***Information Disclosure Statement***

2. No information disclosure statement (IDS) has been filed. Applicant is reminded of their duty to disclose information that is material to the patentability of the instant application.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-2 and 4-5 are rejected under 35 U.S.C. 102(e) as being anticipated by de Vaal et al. (US 6,815,101 B2).

With regard to Claims 1 and 4, de Vaal et al. discloses a method comprising: providing a fuel reactant gas to fuel reactant gas flow fields of the fuel cell power plant (column 7, lines 22-26). The reference discloses purging at least a small amount of partially depleted fuel reactant gas exiting from said flow fields (column 8, lines 22-39) and sensing the direction of flow of gas between said flow fields and ambient (column 9, lines 9-15). The sensing takes place when the hydrogen concentration sensor monitors the hydrogen concentration level in the ambient atmosphere surrounding the fuel cell stack, to determine that the direction of flow of fuel is from the flow fields to the ambient (column 9, lines 9-15). De Vaal et al. also discloses disconnecting the electrical load from the fuel cell stack in response to a low gas concentration in the ambient atmosphere (column 14, lines 48-51). The phrase "low gas flow" encompasses the claimed limitation "no gas flow".

The phrase "of reducing performance degradation due to hydrogen starvation of a fuel cell power plant providing electrical power to a load" is considered intended use. A claim containing a "recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus" if the prior art apparatus teaches all the structural limitations of the claim. *Ex parte Masham*, 2 USPQ2d 1647 (Bd. Pat. App. & Inter. 1987). Therefore, the intended use limitation has been considered, but is given no patentable weight.

With regard to Claims 2 and 5, de Vaal et al. discloses an apparatus comprising: a fuel cell power plant having fuel reactant gas flow fields (column 7, lines 22-26) and a means for providing fuel reactant gas to said flow fields through a fuel system including a source of fuel such as one or more fuel tanks and a fuel regulating system for controlling delivery of the fuel (column 7, lines 24-26). De Vaal et al. discloses a means for purging at least a small amount of partially depleted fuel reactant gas through a fuel purge valve (column 8, line 18) and a means for sensing the direction of flow of gas between said flow fields and ambient through a purge cell voltage sensor which detects a performance drop below a threshold level and sends a signal to a purge valve controller to open the purge valve and discharge the impurities into ambient, the ambient environment being monitored and controlled by other systems (column 8, lines 22-38). De Vaal et al. also discloses a means for disconnecting the electrical load from the fuel cell stack by opening a circuit relay with the power circuit relay controller (column 14, lines 48-67).

The phrase "for reducing performance degradation due to hydrogen starvation of a fuel cell power plant providing electrical power to a load" is considered intended use. A claim containing a "recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus" if the prior art apparatus teaches all the structural limitations of the claim. *Ex parte Masham*, 2 USPQ2d 1647 (Bd. Pat. App. & Inter. 1987). Therefore, the intended use limitation has been considered, but is given no patentable weight.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over de Vaal et al. (US 6,815,101 B2).

With regard to Claims 1 and 4, de Vaal et al. discloses a method comprising: providing a fuel reactant gas to fuel reactant gas flow fields of the fuel cell power plant (column 7, lines 22-26). The reference discloses purging at least a small amount of partially depleted fuel reactant gas exiting from said flow fields (column 8, lines 22-39) and sensing the direction of flow of gas between said flow fields and ambient (column 9, lines 9-15). The sensing takes place when the hydrogen concentration sensor monitors the hydrogen concentration level in the ambient atmosphere surrounding the fuel cell stack, to determine that the direction of flow of fuel is from the flow fields to the ambient (column 9, lines 9-15). De Vaal et al. also discloses disconnecting the electrical load from the fuel cell stack in response to a low gas concentration in the ambient atmosphere (column 14, lines 48-51). De Vaal et al. does not disclose disconnecting the electrical load from the fuel cell in the event that there is no flow of gas from the flow fields toward ambient. It would have been obvious to one of ordinary skill in

the art to disconnect the electrical load from the fuel cell when no gas flow is sensed so as not to damage the fuel cell due to lack of necessary gases and/or damage the load by continuing operation under conditions in which the fuel cell is not providing an uninterruptible power supply for the load.

The phrase "of reducing performance degradation due to hydrogen starvation of a fuel cell power plant providing electrical power to a load" is considered intended use. A claim containing a "recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus" if the prior art apparatus teaches all the structural limitations of the claim. *Ex parte Masham*, 2 USPQ2d 1647 (Bd. Pat. App. & Inter. 1987). Therefore, the intended use limitation has been considered, but is given no patentable weight.

7. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over de Vaal et al. (US 6,815,101 B2), as applied to Claim 2 above, and in further view of Gast (US Pub. No. 2005/0161520).

De Vaal et al. discloses the apparatus in paragraph 4 above, but do not disclose wherein said means for sensing the direction of flow comprises a flap disposed within the flow of gas which will operate a switch when the flow of gas is toward ambient.

Gast discloses the use of simple flow sensors, such as those which are flow-actuated flaps or plates held in a preferred position, and send a signal as a

function of their position (paragraph 0073). Therefore, at the time of the invention, it would have been obvious to one of ordinary skill in the art to use a flap actuated sensor with the apparatus of de Vaal et al., because Gant teaches the flap actuated sensor enabling the circulation of circulating systems to be monitored and/or subject to close-loop and/or open-loop control as a function of power, flow and/or volumetric through-flow (paragraph 0074).

### ***Response to Arguments***

8. Applicant's arguments filed October 11, 2007, have been fully considered. A new ground of rejection has been made based on newly found prior art.

9. The Declaration under 37 CFR 1.132 filed March 12, 2007, has been reconsidered, as agreed upon by the Examiner in an interview dated July 26, 2007.

(a) To be of probative value, any objective evidence should be supported by actual proof. In re De Blauwe, 736 F.2d 699, 705, 222 USPQ 191, 196 (Fed. Cir. 1984). See MPEP 716.01(c) I.

(b) The declaration, considered to be expert opinion, was inadequate to overcome the rejection based on prior art because there was no factual evidence supporting the statements. Ex parte Gray, 10 USPQ2d 1922 (Bd. Pat. App. & Inter. 1989). See MPEP 716.01(c) II1.




**Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karie O'Neill whose telephone number is (571) 272-8614. The examiner can normally be reached on Monday through Friday from 8am to 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached on (571) 272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Karie O'Neill  
Examiner  
Art Unit 1795

  
12.18.07

KAO